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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,461	10/03/2003	Michael John Gidley	F3319(C)	3331
201 7590 11/27/2007 UNILEVER INTELLECTUAL PROPERTY GROUP 700 SYLVAN AVENUE, BLDG C2 SOUTH ENGLEWOOD CLIFFS, NJ 07632-3100			EXAMINER STULII, VERA	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 11/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/678,461	Applicant(s) GIDLEY ET AL.	
	Examiner Vera Stulii	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,13,14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) 6-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,13,14 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The rejection of claims 1, 3-5, and 13-14 are rejected under 35 U.S.C. 112, second paragraph, has been withdrawn due to the claims amendments.

Terminal Disclaimer

The terminal disclaimer filed on September 18, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of Patent No. 7,169,426 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-5, 13-14 remain rejected and newly added claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamane et al (EP 0,815,746 A1) in view of Desrosier et al (FUNDAMANTALS OF FOOD FREEZING).

Jay and Francis et al are cited as evidence as discussed below.

As sated in the previous Office action, Yamane et al disclose the method of manufacturing fruit by cooling fruit below the freezing point (p. 3 lines 30-34). Yamane et al disclose rapidly cooling fruit from room temperature to a temperature that is close to a freezing point (0°C), and then slower cooling to a temperature that is below freezing

point (p. 3 lines 44-48). Yamane et al also disclose that the slow cooling can be combined with a rapid freezing treatment, in which the food is frozen at -18°C or lower, for example, from supercooled state below the freezing point (p. 9 lines 1-7). Yamane et al also disclose freezing points and regions below the freezing point from -1°C to -18°C (pp. 6-7; p. 9 lines 1-7). Thus Yamane et al discloses a process for production of frozen fruits comprising the steps of cooling fruits to 0°C (temperature that is close to a freezing point), under-cooling fruits from 0°C to a temperature up to -18°C , and then reducing the temperature further to produce the fruit in a frozen state. Yamane et al disclose a slow cooling rate range of $0.01\text{-}0.5^{\circ}\text{C}/\text{hour}$ (Abstract). Yamane et al also disclose freezing points of fruits from -0.9°C to -2.4°C and regions below the freezing point from -1°C to -18°C (pp. 6-7; p. 9 lines 1-7). Yamane et al disclose the following fruits: persimmon, apple, lemon, cherry, asian pear, strawberry, fig, peach, blueberry, apricot (p. 6). Yamane et al also discloses that "in the present invention, any method may be employed to subject the food or the like to a cooling treatment in a temperature zone in the non-freezing region below the freezing point as long as a relatively rapid cooling treatment can be carried out in a low-temperature region below 0°C , and as long as a slow cooling treatment to below the freezing point at 0.01 to 0.5 $^{\circ}\text{C}/\text{hour}$... can be carried out, and no particular restrictions are imposed on this method (p. 4 lines 54-58). Regarding the temperature difference between the surface and the core, Yamane et al disclose that "Furthermore, in the present invention, it is possible to preserve a perishable food or the like, especially one composed of an animal or vegetable material, with only the inner cells thereof in a non-frozen state. The above-mentioned slow

cooling treatment, which is carried out at a gradual cooling rate of 0.01 to 0.5 °C/hour, can be combined with a rapid freezing treatment, in which the food or the like is frozen at -18 °C or lower, for example, from a supercooled state below the freezing point, which makes it easier for the extracellular fluid to freeze, while making it more difficult for the intracellular fluid to freeze, so that it is possible to freeze the outer cells of the food or the like and to preserve the inner cells in a non-frozen state. When a method such as this is employed in the present invention, it is possible to maintain a perishable food, especially fruit, an animal product, seafood, or the like, at a high level of freshness and quality" (p. 9 lines 1-8).

Yamane et al do not disclose recited cooling range, temperature difference between the core and the surface of fruit, and a particular fracture force.

Desrosier et al disclose that "great advances have been made in the techniques for freezing fruit rapidly. The present individually quick-frozen (IQF) and cryogenic frozen fruits are superior in quality and stand up better upon thawing than the fruits frozen slowly in packages, cartons or bulk containers" (p. 48). As evidenced by Jay (MODERN FOOD MICROBIOLOGY) "quick or fast freezing is the process by which the temperature of foods is lowered to about -20°C within 30 minutes", and "slow freezing refers to the process whereby the desired temperature is achieved within 3-72 hours" (p.325).

Since Yamane et al also discloses combination of rapid cooling with slow cooling and that any method may be employed to subject the food or the like to a cooling treatment in a temperature zone in the non-freezing region below the freezing point, and

Desrosier et al discloses advantages of quick cooling/freezing techniques, it would have been obvious to modify disclosure of Yamane et al and to vary cooling rates in order to achieve high level of freshness and quality as disclosed by Yamane et al. One of the ordinary skill in the art would have been motivated to do so in order to obtain superior in quality product as taught by Desrosier et al. It is noted that such cooling rate is in the claimed range as evidenced by Jay. As evidenced by Francis et al (Wiley Encyclopedia of Food Science and Technology) "[t]he freezing rate may be evaluated by the speed of movement of the ice (in centimeters per hour) through a product. This speed is faster near the surface and slower toward the center" (p. 1117). Thus employing method steps as taught by Yamane et al and cooling rate as taught by Desrosier et al. for the reasons stated above, would inherently lead to a temperature difference between the surface and core and fracture force as a measurement of mechanical properties of food in relation to texture as claimed.

Response to Arguments

Applicants' arguments filed September 18, 2007 have been fully considered but they are not persuasive.

On page 9 of the Reply to the Previous Office action filed September 18, 2007, Applicants state that "Yamane et al teaches that the process becomes inoperable for its intended purpose when the rate of under-cooling is greater than 0.5° C/hr" (see also p. 11 of the Reply). Examiner respectfully disagrees. Applicants are referred to the rejection as restated above and Yamane et al p. 4 lines 54-58, where Yamane et al

teach that "in the present invention, any method may be employed to subject the food or the like to a cooling treatment in a temperature zone in the non-freezing region below the freezing point as long as a relatively rapid cooling treatment can be carried out in a low-temperature region below 0°C, and as long as a slow cooling treatment to below the freezing point at 0.01 to 0.5. C/hour ... can be carried out, and no particular restrictions are imposed on this method" (p. 4 lines 54-58). Thus Yamane et al teaches combination of a slow cooling and rapid cooling, and therefore the overall cooling rate would be greater than 0.5° C/hour.

On page 9 of the Reply, Applicants state that "Yamane et al are silent about the flavor and texture of frozen fruits eaten in the frozen state". On page 10 of the Reply, Applicants state that "Both Desrosier et al and Jay are silent about the effects of cooling process on the flavor and texture of frozen fruits that are designed to be eaten in the frozen state". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., flavor and texture) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 9 of the Reply to Applicants state that "Both Desrosier et al and Jay are silent about a rate of under-cooling chosen to produce a temperature difference between the surface and core of the fruit during the under-cooling step that is less than 1.5°C". In response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Further in this regard, it is noted that although the references do not specifically disclose every possible quantification or characteristic of its product, including fracture force and temperature difference between the core and surface, these characteristics would have been expected to be in the claimed range absent any clear and convincing evidence and/or arguments to the contrary. The references disclose the same starting materials and methods as instantly (both broadly and more specifically) claimed, and thus one of the ordinary skill in the art would recognize that the fracture force and temperature difference between the core and surface, among many other characteristics of the product obtained by referenced method, would have been an inherent result of the process disclosed therein. The Patent Office does not possess the facilities to make and test the referenced method and product obtain by such method, and as reasonable reading of the teachings of the references has been applied to establish the case obviousness, the burden thus shifts to applicant to demonstrate otherwise.

On page 11 of the Reply to Applicants state that prior art is improper as 103(a) prior art. Examiner respectfully disagrees. Applicants are referred to the rejection as restated above and to the response to arguments as stated above.

In response to Applicants arguments stated on pp. 12-13, Applicants are referred to the rejection as restated above and to the response to arguments as stated above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Stulii whose telephone number is (571) 272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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VS


KEITH D. HENDRICKS
SUPERVISORY PATENT EXAMINER